What is claimed is:

1. An apparatus for encapsulating and extracting Ethernet frames to and from a Very high speed Digital Subscriber Line (VDSL) facility, comprising:

an Ethernet transceiver for receiving and transmitting Ethernet frames from and to an Ethernet source;

an Ethernet encapsulation/extraction (EEE) unit coupled to said Ethernet transceiver and operative to store Ethernet frames received therefrom for subsequent forwarding encapsulated within VDSL frames over said VDSL facility, said EEE unit operative to extract Ethernet frames received from said VDSL facility and subsequently store and them for forwarding to said Ethernet transceiver; and

said VDSL transceiver for receiving and transmitting VDSL frames from and to said VDSL facility.

2. The apparatus according to claim 1, wherein said Ethernet encapsulation/extraction unit comprises:

Ethernet input circuitry coupled to the transmit portion of said Ethernet source and operative to convert the Tx serial input bitstream to a parallel stream of Tx bytes;

Ethernet output circuitry coupled to the receive portion of said Ethernet source and operative to convert a parallel stream of Rx bytes into a Rx serial bitstream;

VDSL output circuitry coupled to the transmit portion of said VDSL facility and operative to transfer VDSL frames ready for transmission to said VDSL transceiver;

VDSL input circuitry coupled to the receive portion of said VDSL facility and operative to receive VDSL frames from said VDSL transceiver;

a memory unit for storing data received from said Ethernet input circuitry and said VDSL input circuitry; and

a data processor coupled to said Ethernet input circuitry, Ethernet output circuitry, said VDSL output circuitry and said VDSL input circuitry, said data processor operative to store and forward data received via said Ethernet input circuitry to

said VDSL output circuitry, said data processor operative to store and forward data received via said VDSL input circuitry to said Ethernet output circuitry.

3. The apparatus according to claim 1, wherein said Ethernet transceiver comprises a 10BaseT Ethernet transceiver operative to communicate with a 10BaseT Ethernet source.

4. A Digital Subscriber Line Access Multiplexor (DSLAM) for encapsulating and extracting Ethernet frames to and from one or more Very high speed Digital Subscriber Line (VDSL) facilities, comprising:

a plurality of VDSL transceivers for receiving and transmitting VDSL frames from and to said VDSL facilities;

an Ethernet transceiver for receiving and transmitting Ethernet frames from and to an Ethernet source;

an Ethernet encapsulation/extraction (EEE) unit coupled to said plurality of VDSL transceivers and operative to extract Ethernet frames received from said VDSL facility and subsequently store and them for forwarding to said Ethernet transceiver, said EEE unit operative to store Ethernet frames received from said Ethernet source for subsequent forwarding encapsulated within VDSL frames over said VDSL facilities; and

an Ethernet switch operative to provide switching functions for one or more bidirectional Ethernet frame streams to and from of said EEE and said Ethernet transceiver.

5. The apparatus according to claim 4, wherein said Ethernet encapsulation/extraction unit comprises:

Ethernet input circuitry coupled to the transmit portion of said Ethernet source and operative to convert a plurality of Tx serial input bitstreams to a plurality of parallel streams of Tx bytes;

Ethernet output circuitry coupled to the receive portion of said Ethernet source and operative to convert a plurality of parallel streams of Rx bytes into a plurality of Rx serial bitstreams;

VDSL output circuitry coupled to the transmit portion of each VDSL facility and operative to transfer VDSL frames ready for transmission to said VDSL transceivers;

VDSL input circuitry coupled to the receive portion of each VDSL facility and operative to receive VDSL frames from said VDSL transceivers;

a memory unit for storing data received from said Ethernet input circuitry and said VDSL input circuitry; and

a data processor coupled to said Ethernet input circuitry, Ethernet output circuitry, said VDSL output circuitry and said VDSL input circuitry, said data processor operative to store and forward data received via said Ethernet input circuitry to said VDSL output circuitry, said data processor operative to store and forward data received via said VDSL input circuitry to said Ethernet output circuitry.

6. The apparatus according to claim 4, wherein said Ethernet transceiver comprises a 100BaseT Ethernet transceiver operative to communicate with a 100BaseT Ethernet source.

7. The apparatus according to claim 4, wherein said Ethernet switch comprises an Ethernet switch adapted to switch between a plurality of 10BaseT Ethernet channels and at least one 100BaseT Ethernet source.

8. A method of encapsulating Ethernet frames onto a Very high speed Digital Subscriber Line (VDSL) facility, said method comprising the steps of:

receiving Ethernet frames from an Ethernet source;

storing said Ethernet frames for subsequent forwarding;

encapsulating said previously stored Ethernet frames within VDSL frames; and

transmitting said VDSL frames over said VDSL facility.

9. The method according to claim 8, wherein said Ethernet source comprises a 10BaseT Ethernet source.

10. A method of extracting Ethernet frames from a Very high speed Digital Subscriber Line (VDSL) facility, said method comprising the steps of:

receiving VDSL frames from said VDSL facility;

extracting Ethernet frames from the VDSL frames received;

storing said Ethernet frames for subsequent forwarding; and

forwarding said Ethernet frames to an Ethernet source.

11. The method according to claim 10, wherein said Ethernet source comprises a 10BaseT Ethernet source.